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10/538,998	12/16/2005	Ping Ding	60295-USA1	9299

7590

06/22/2006

John M Sheehan  
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EXAMINER

CHU, YONG LIANG

ART UNIT

PAPER NUMBER

1626

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/538,998

Applicant(s)

DING ET AL.

Examiner

Yong Chu

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 3-8, 15-20, 27-32 and 37-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 9-14, 21-26, and 33-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

Claims 1-60 are pending in this application.

### ***Priority***

This application is a 371 of PCT/US03/38878, filed on 08 December 2002. Acknowledgement is made of Applicant's claim for U.S. Provisional Patent Application 60/434,718 and 60/495,059 under 35 U.S.C. §119(e), filed on 18 December 2002, and 14 August 2003, respectively.

### ***Response to Restriction***

The response to the restriction request with election of Group I (e.g. claims 1-36 with election of species of Compound 395 as shown in Table 1 of the specification) *with traverse* by Applicants' representative, Attorney John M. Sheehan dated on 15 May 2006, has been considered. Applicant's arguments have been fully considered but they are not persuasive, because ***there are numerous variables in the formula (I), and the core structure with special technical feature, which holds the unity of the invention, does not exist.*** It also posts serious burden to Examiner for analyzing, searching and examining the whole application with reasonable time frame. Therefore, the restriction requirement is indeed proper. Please refer to the office action dated on April 13, 2006.

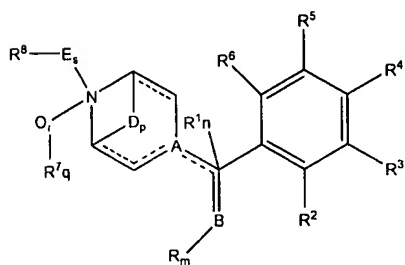
However, in accordance with M.P.EP 821.04 and *In re Ochiai*, 71 F.3d 1565, 37 USPQ 1127 (Fed. Cir. 1995), rejoinder of product claims with process claims

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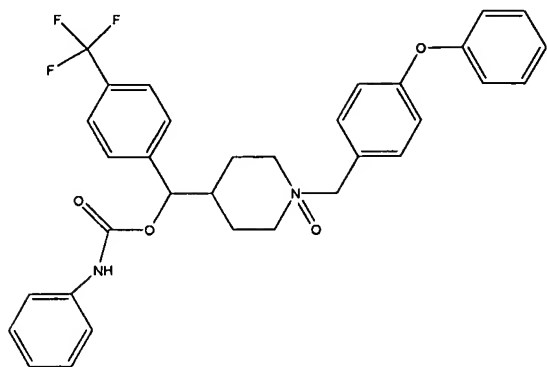
commensurate in scope with the allowed product claims will occur following a finding that the product claims are allowable. Until, such time, a restriction between product claims and process claims is deemed proper. Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution to maintain either dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The election of **Group I**, directed to products of formula (I),



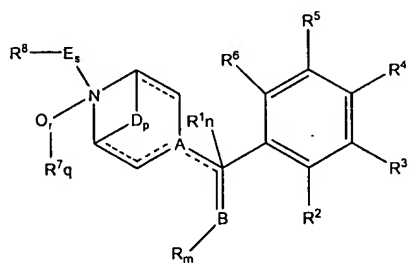
and the specific compound 395,



, depicted in Table 1 of the specification is  
acknowledged.

### ***Status of the Claims***

The scope of the invention of the elected subject matter is as follows:



Compounds of formula (I), depicted in claim 1,

wherein:

**m** and **n** are 1;

**q** is 0;

**r** is 0 or 1;

**s** is 1;

**p** is 0;

**A** is  $-\text{CH}$  forming 1,2,5,6-tetrahydropyridine;

**R**<sup>2</sup> – **R**<sup>6</sup> is defined as in claim 1;

**R**<sup>1</sup> is H;

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**B** is -O, -OCH<sub>2</sub>, -OC(=O)-, or -OC(=O)NR<sup>15</sup>, wherein R<sup>15</sup> is H;

**R** is a substituted phenyl, wherein substituents R<sup>17</sup>, R<sup>18</sup>, R<sup>19</sup>, R<sup>20</sup>, and R<sup>21</sup> are defined in claim 1;

**R**<sup>8</sup> is a substituted phenyl, wherein substituents R<sup>22</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, and R<sup>26</sup> are defined in claim 1;

**E** is -(CR<sup>27</sup>R<sup>28</sup>)<sub>x</sub>-(CR<sup>29</sup>R<sup>30</sup>)<sub>y</sub>-, wherein x is 1, and y is 0;, wherein substituents R<sup>27</sup> -R<sup>30</sup>, are defined in claim 1.

As a result of the election and the corresponding scope of the invention identified supra, claims 3-8, 15-20, 27-32, 37-60, and the remaining subject matter of claims 1-2, 9-14, 21-26, and 33-36 are withdrawn from further consideration pursuant to 37 CFR 1.142 (b) as being drawn to non-elected inventions.

The withdrawn subject matter is patentably distinct from the elected subject matter as it differs in structure and element and will require separate search considerations. In addition, a reference, which anticipates one group, would not render obvious the other.

*Therefore, claims 1-2, 9-14, 21-26, and 33-36 are ready for examination.*

### ***Claim Rejections - 35 USC § 102***

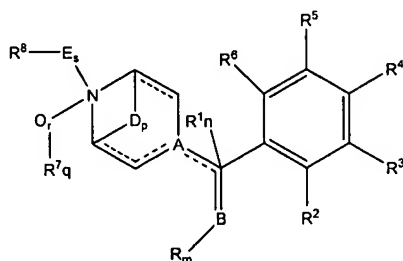
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102 (b) as being anticipated by Rorig et al., *U.S. Pat. Num. 3,100,775* (1963).

Applicants instant elected invention in claims 1-2, 9-14, 21-26, and 33-36



teaches compounds of formula I , depicted in claim 1, and their agriculturally acceptable salts thereof wherein:

**m** and **n** are 1;

**q** is 0;

**r** is 0 or 1;

**s** is 1;

**p** is 0;

**A** is  $-\text{CH}$  forming 1,2,5,6-tetrahydropyridine;

**R<sup>2</sup> – R<sup>6</sup>** is defined as in claim 1;

**R<sup>1</sup>** is H;

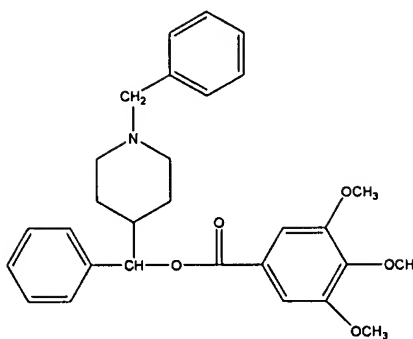
**B** is  $-\text{O}$ ,  $-\text{OCH}_2$ ,  $-\text{OC}(=\text{O})-$ , or  $-\text{OC}(=\text{O})\text{NR}^{15}$ , wherein **R<sup>15</sup>** is H;

**R** is a substituted phenyl, wherein substituents **R<sup>17</sup>**, **R<sup>18</sup>**, **R<sup>19</sup>**, **R<sup>20</sup>**, and **R<sup>21</sup>** are defined in claim 1;

**R<sup>8</sup>** is a substituted phenyl, wherein substituents **R<sup>22</sup>**, **R<sup>23</sup>**, **R<sup>24</sup>**, **R<sup>25</sup>**, and **R<sup>26</sup>** are defined in claim 1;

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**E** is  $-(\text{CR}^{27}\text{R}^{28})_x-(\text{CR}^{29}\text{R}^{30})_y-$ , wherein **x** is 1, and **y** is 0;, wherein substituents  $\text{R}^{27}-\text{R}^{30}$ , are defined in claim 1.



Rorig et al. teach a specific compound in Example

30, line 55-65 column 14 in *U.S. Pat. Num. 3,100,775* (1963), read on the instant claims

1 and 2, wherein:

**m** and **n** are 1;

**q** is 0;

**r** is 0;

**s** is 1;

**p** is 0;

**A** is  $-\text{CH}$  forming 1,2,5,6-tetrahydropyridine;

$\text{R}^2-\text{R}^6$  is H;

$\text{R}^1$  is H;

**B** is  $-\text{OC}(=\text{O})-$ , wherein  $\text{R}^{15}$  is H;

**R** is a substituted phenyl, wherein substituents  $\text{R}^{17}$  and  $\text{R}^{21}$  are H, and,  $\text{R}^{18}$ ,  $\text{R}^{19}$ , and  $\text{R}^{20}$  are alkoxy;

$\text{R}^8$  is a substituted phenyl, wherein substituents  $\text{R}^{22}$ ,  $\text{R}^{23}$ ,  $\text{R}^{24}$ ,  $\text{R}^{25}$ , and  $\text{R}^{26}$  are H;



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E is  $-(\text{CR}^{27}\text{R}^{28})_x-(\text{CR}^{29}\text{R}^{30})_y-$ , wherein x is 1, and y is 0;, wherein substituents  $\text{R}^{27}-\text{R}^{30}$  is H.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

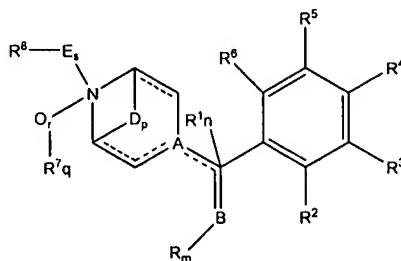
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 2 are rejected under 35 U.S.C. 103 (a) as unpatentable over Rorig *et al.*, U.S. Pat. Num. 3,100,775.

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Applicants instant elected invention in claims 1-2, 9-14, 21-26, and 33-36



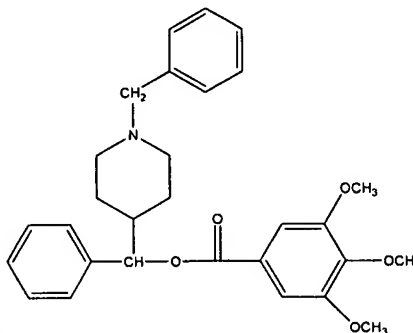
teaches compounds of formula I

, depicted in claim 1, and

their agriculturally acceptable salts thereof wherein:

**m** and **n** are 1;**q** is 0;**r** is 0 or 1;**s** is 1;**p** is 0;**A** is  $-\text{CH}$  forming 1,2,5,6-tetrahydropyridine;**R**<sup>2</sup> – **R**<sup>6</sup> is defined as in claim 1;**R**<sup>1</sup> is H;**B** is  $-\text{O}-$ ,  $-\text{OCH}_2-$ ,  $-\text{OC}(=\text{O})-$ , or  $-\text{OC}(=\text{O})\text{NR}^{15}$ , wherein **R**<sup>15</sup> is H;**R** is a substituted phenyl, wherein substituents **R**<sup>17</sup>, **R**<sup>18</sup>, **R**<sup>19</sup>, **R**<sup>20</sup>, and **R**<sup>21</sup> are defined in claim 1;**R**<sup>8</sup> is a substituted phenyl, wherein substituents **R**<sup>22</sup>, **R**<sup>23</sup>, **R**<sup>24</sup>, **R**<sup>25</sup>, and **R**<sup>26</sup> are defined in claim 1;**E** is  $-(\text{CR}^{27}\text{R}^{28})_x-(\text{CR}^{29}\text{R}^{30})_y-$ , wherein **x** is 1, and **y** is 0;, wherein substituents **R**<sup>27</sup> – **R**<sup>30</sup>, are defined in claim 1.

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Determination of the scope and content of the prior art (MPEP §2141.01)

Rorig et al. teach a specific compound in Example

30, line 55-65 column 14 in *U.S. Pat. Num. 3,100,775* (1963), read on the instant claims

1 and 2, wherein:

**m** and **n** are 1;

**q** is 0;

**r** is 0;

**s** is 1;

**p** is 0;

**A** is  $-\text{CH}$  forming 1,2,5,6-tetrahydropyridine;

$\text{R}^2 - \text{R}^6$  is H;

$\text{R}^1$  is H;

**B** is  $-\text{OC}(=\text{O})-$ , wherein  $\text{R}^{15}$  is H;

**R** is a substituted phenyl, wherein substituents  $\text{R}^{17}$  and  $\text{R}^{21}$  are H, and,  $\text{R}^{18}$ ,  $\text{R}^{19}$ , and  $\text{R}^{20}$  are alkoxy;

$\text{R}^8$  is a substituted phenyl, wherein substituents  $\text{R}^{22}$ ,  $\text{R}^{23}$ ,  $\text{R}^{24}$ ,  $\text{R}^{25}$ , and  $\text{R}^{26}$  are H;

**E** is  $-(\text{CR}^{27}\text{R}^{28})_x-(\text{CR}^{29}\text{R}^{30})_y-$ , wherein **x** is 1, and **y** is 0; wherein substituents  $\text{R}^{27} - \text{R}^{30}$  is

H.

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Rorig et al. do not teach all the compounds claimed in the instant application under examination. However, Rorig et al teach a class of compound with general

chemical formula  $\text{Ph}'-\overset{\text{Pyr}}{\underset{|}{\text{CH}}}-\text{(Alk)}_n\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{(Alk)}_m-\text{Ph}''$  described in claim 1, line 22 column 17 of *U.S. Pat. Num. 3,100,775*, which claims the compounds with function group **B** is -OC(=O)-, wherein **R**<sup>15</sup> is H.

*Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)*

One skilled in the art would have found the claimed compounds prima facie obvious for combining the instantly claimed specific compound and the general formula (I) as suggested by Rorig *et al.*

***Claim Objections***

Claims 9-14, 21-26, and 33-36 are objected to as being dependent upon a rejected base claims 1-2, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

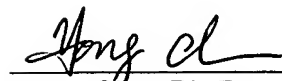
No claims are allowed.

***Telephone Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Chu whose telephone number is 571-272-5759. The examiner can normally be reached on 7:00 am - 3:30 pm EST.

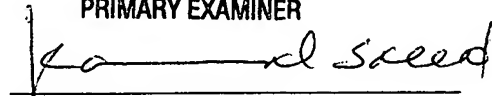

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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